155181

ZONE A

CHLOROBENZENE

INDUSTRIAL HYGIENE

AND

RCRA

TRAINING OUTLINE

CER 089429

APPENDIX

→ Addendums

A. Sewer Incident Investigation 4/29/83

B. Use of Process Sewer System.

CER 089430

DEPARTMENT 233 (MCB)

BENZENE HYGIENE AND ENVIRONMENTAL TRAINING PROGRAM

Conducted by: _____ Date: _____

Outline

1. Review 1982 performance in training and implementation of Benzene Hygiene Program.

2. Conduct individual fit of respirator of each person in attendance.

3. Using video tape, show health hazards of Benzene, production work practices and details, medical surveillance, toxicoloty, air monitoring, personal protective equipment and personal hygiene.

4. Instructions on care of personal respirator, including cartridge change weekly, and respirator change monthly.

5. Hand out Safety Procedure booklet, discuss section on personal protective equipment when sampling, loading and unloading cars, drums, etc. and breaking into lines. Strong emphasis on handling and drumming residue. Instruct noncompliance on use of personal protective equipment can result in disciplinary action.

6. Discuss RCRA: new government regulations:

   A. Residue drumming facilities - stop drumming when leaks occur - notify supervision immediately.

   B. Periodic inspection of stored residue drums.

   C. Recording and verification of tank levels when transferring in or out of tanks. Recording and reporting any leaks at pumps, valves, or piping.

   D. In event of spills, contact supervision immediately to assist in containment or disposal or a spill. Also contact plant environmental group.

7. Discuss plant Sewer Emergency Plan.

   Hand out Department 233 Emergency Plan, thoroughly discuss checklist for checking possible sources of Benzene getting into plant sewer system and what to do.

8. Review program with question and answer period.

CER 089431

SEWER EMERGENCY ACTION PLAN

A plant sewer emergency is basically a flammable sewer situation. It will be declared throughout the plant by the appropriate fire call for the plant zone affected. Department personnel should immediately and automatically carry out the following Sewer Emergency Action Plan.

FROM R. E. Howard

DATE August 6, 1982

SUBJECT Sewer Emergency Action Plan
Chlorobenzene Complex (Revision 1)

TO S. Smythe
A. Johnston

cc J. Boehm
E. Valentine
Zone A Shift Supvs.
Night Superintendents
W. Conant
D. Mayer

Attached please find the revised "Chlorobenzene Sewer Emergency Action Plan". The previous plan is obsolete as a result of the recent commissioning of the benzene collection system (CEA 3322). Please review this revised plan with your personnel.

Let's plan on a dry run of this action plan in the first week of September (provided I'm mobile). Any problems or diffi[c]iencies should be uncovered and can then be addressed.

Bob

R. E. Howard

smg

CER 089433

CHLOROBENZENE SEWER EMERGENCY ACTION PLAN
(Revision 1 - July 30, 1982)

Historically the potential loss of free organics from the Chlorobenzene complex has been recognized as a possible contributor to abnormal sewer conditions (flammable mixture). Such a loss would have its greatest potential impact on the west plant sewers. This risk has been substantially reduced through the recent installation of a "collection pit" and related separation equipment. This system pretreats all department effluent for recovery of free organics prior to release to the plant sewer system.

There are three effluent streams (reference attached sewer layout) from Departments 233 and 218, which could be organic laden:

1. Underflow from light layer separator (Item 187)

   - exits on north side of the department and enters plant sewers at Box 3-G, (sealed lid) and joins the main flow at Box 33-F (corner of "D" and 4th Streets).

2. Overflow from heavy layer separator (Item 190)

   - exits on south side of the department and enters plant sewers at Box 33-C-1 (3rd Street).

3. Underflow from collection pit (Item 182)

   - exits south side of the department and enters plant sewers at Box 33-C-1 (3rd Street).

In the event the west plant sewers are "hot" the following actions are to be implemented:

Profile the flammability of sewer boxes on D Street (Boxes 33-F, 33-E, 33-C, and 33-B). The intent is to determine the most probable exit point from the department (e.g. higher readings near 3rd Street imply losses from the south side of the department). The implementation order of the following checks will be based on this profile.

CER 089434

CHLOROBENZENE SEWER EMERGENCY ACTION PLAN
(Revision 1 - July 30, 1982)

1. Verify the specific gravity of the heavy layer separator overflow is within normal range (1.0 ± .05 at 25°C), sample the stream and observe for organic presence (emulsion or two phase layer). If organics are present direct the flow to the collection pit.

2. Verify the specific gravity of the light layers underflow is within normal range (1.0 ± .05 at 25°C). Sample the stream and observe for organic presence (emulsion or two phase layer). If organics are present direct the flow to the collection pit.

3. Verify the collection pit operations are normal (i.e. pumps are in operation and are moving liquid). If the pit is underflowing (level ≥ 100%) as a result of rain, 218 drowning jet, or pump failure, sample the quality of the underflow at the vent (located east of the benzene trap compartment). Observe for organic presence (emulsion or two phase layer). If organics are present, then the pit's capacity to contain organics has been exceeded. Immediate steps to identify and correct the process loss must be taken. A check list of potential loss points follows:

Process Source Checklist

a. Check "free" benzene quantity in 113 benzene/water separator ~~sweet~~ vent (normal ≤ 1%).

b. Check the pressure at the 113 benzene/water separator (normal 1-2 psig). High pressure may be an indication of poor condensation and can be caused by:

1) high benzene column vent temperatures
2) loss of water flow to the benzene column vent condenser
3) loss or reduced MCB flow to the separator vent condenser.

Redirection of effluent from 187 tank and 190 tank in response to out of range specific gravity is automatically initiated by interlock. Confirmation of proper action must be made. Manual redirection can be initiated by panel mounted selector switch. Redirection is a temporary solution to an organic loss problem. The limited capacity of the pit requires that immediate steps to correct the layer inversion or accumulation in the separators be implemented. Substained department operations require that normal effluent direction to the plant sewers be resumed ASAP.

CER 089435

If pressures/temperatures are excessive, reduce column feed rates.

c. If off gas HCl is being sewered, check gas temperature. If temperature is high (≥ -10°C), determine cause of poor cooling and correct (compressor problem or cooler freeze up). Reduce chlorinator rate if cooling can not be restored.

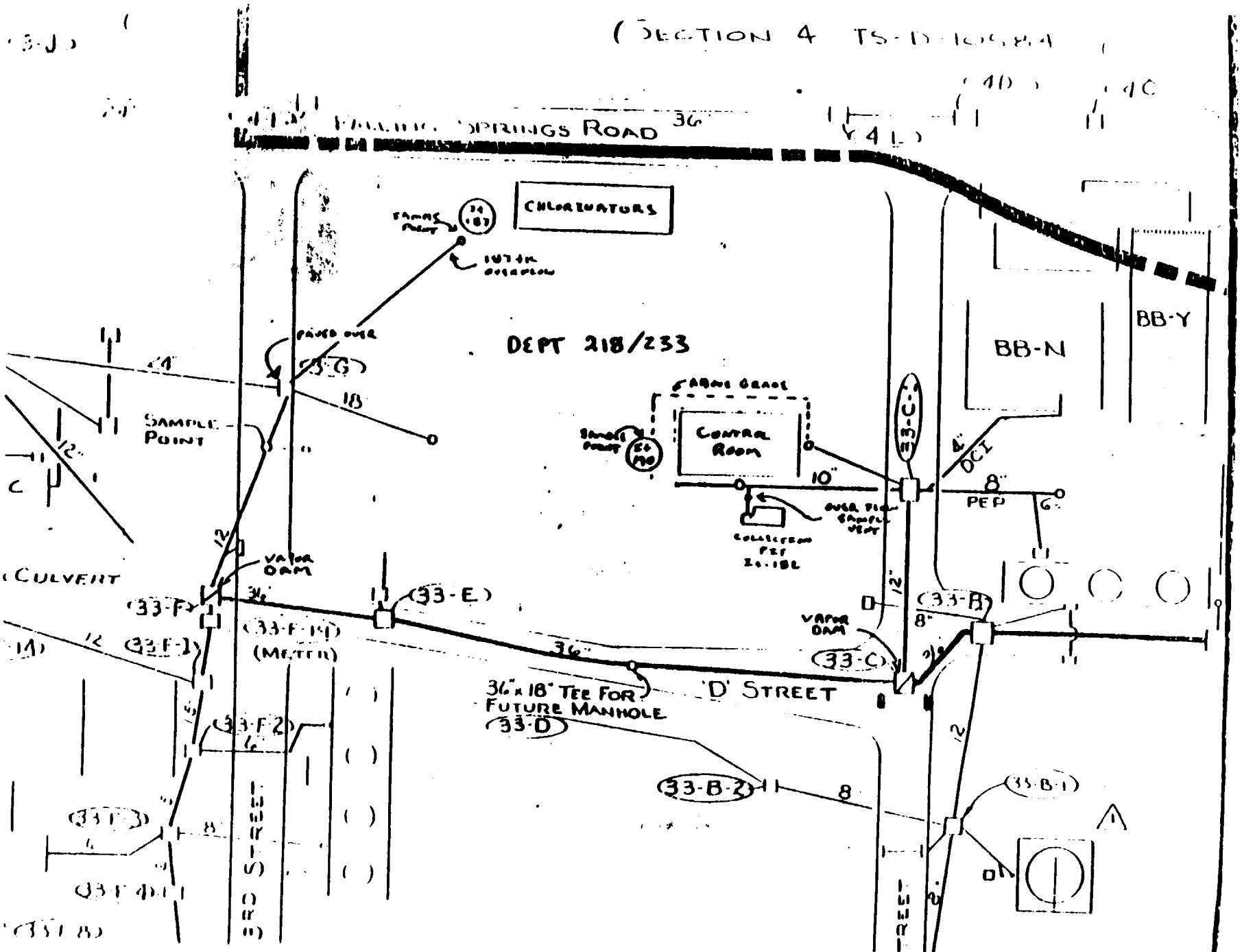
In the event the east plant sewers are "hot", investigate operations at the E-Still.

1. Check the jet barometric leg effluent for excessive loss of organics to the sewer. If organics are present take actions to correct. Shut down of the E-Still is an alternative.

2. Survey tank car loading spots and storage areas for leaks to the sewer. Contain any spills.

As soon as time permits, the Emergency Control Center should be informed of status of action plans and corrective actions in effect.

SAS



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